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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,280	02/07/2002	Chang Yul Cha	270	2458
7590 01/16/2004				
JOHN O. MINGLE P.O. Box 1311 Laramie, WY 82073-1311			EXAMINER WONG, EDNA	
			ART UNIT 1753	PAPER NUMBER

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/071,280

Applicant(s)

CHA, CHANG YUL

Examiner

Edna Wong

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 6-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

***Election/Restrictions***

Applicant's election without traverse of Group I, claims **1-5**, in the Paper dated December 29, 2003 is acknowledged.

Accordingly, claims **6-14** are withdrawn from consideration as being directed to a non-elected invention

***Specification***

The disclosure is objected to because of the following informalities:

page 1, line 5, the word "pending" should be amended to the words -- now US Patent No. 6,419,799 --.

page 7, line 25, a -- . -- (period) should be inserted after the word "waste".

Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wicks et al.** (US Patent No. 5,968,400).

Wicks teaches a process for microwave destruction of solid contaminated waste comprising:

- (a) compacting said waste **13** (col. 1, lines 50-56) on a platform **11**, wherein said platform contains a carbonaceous substance (= SiC) [col. 3, lines 55-61; and Fig. 1];
- (b) radiating said platform with microwaves **3** (col. 3, lines 42-55; and Fig. 1) to produce pyrolysis of said waste (= uses microwave radiation to physically transform a waste material = combustion) [col. 1, lines 43-45; and col. 4, lines 27-31];
- (c) collecting vapors from said pyrolysis with a purge gas (= the process can be further controlled by the use of inert gases to provide a regulated fluid flow through the system) [col. 4, lines 32-33]; and
- (d) treating said purge gas with microwaves **19** while passing through an oxidation bed energized with a carbonaceous substance (= SiC) [col. 4, lines 20-31; and Fig. 1].

The contaminated waste further comprises harmful wastes consisting of chemical

agents (= radioactive materials, oils, solvents, resins, volatile organic compounds, and etc.) [col. 2, lines 34-45].

All carbonaceous substances further comprise metal carbides (= SiC) [col. 3, lines 56-60; and col. 4, lines 20-24].

Wicks does not teach wherein the oxidation bed is an oxidation catalyst bed; wherein said purge gas further comprises significant oxygen in order to enhance pyrolysis; and wherein said oxidation catalyst bed energized with a carbonaceous substance further comprises being selected from the group consisting of silicon carbide pellets mixed with oxidation catalyst particles, oxidation catalyst particles with a substrate impregnated with silicon carbide, and oxidation catalyst particles deposited over a center of silicon carbide.

However, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because one skilled in the art would have been motivated to have modified the process of Wicks with wherein the oxidation bed is an oxidation catalyst bed and wherein said oxidation catalyst bed energized with a carbonaceous substance further comprises being selected from the group consisting of silicon carbide pellets mixed with oxidation catalyst particles, oxidation catalyst particles with a substrate impregnated with silicon carbide, and oxidation catalyst particles deposited over a center of silicon carbide because Wicks

teaches that the microwave off-gas treatment system can be customized for a particular waste stream (col. 7, lines 43-44). Thus, it would have been within the skill of the artisan to have incorporate oxidation catalyst particles into the oxidation bed because the photocatalytic destruction of contaminated waste is well within the skill of the artisan and would have accelerated the process in reducing and/or eliminate harmful constituents in the off-gas emissions.

As to wherein said purge gas further comprises significant oxygen in order to enhance pyrolysis, Wicks teaches that a simple air stream can be fed into the air inlet 7 (col. 3, lines 53-55). Since Wicks uses the microwave radiation to physically transform a waste material (= combustion) [col. 1, lines 43-45; and col. 4, lines 27-31], it appears that the purge gas would have comprised significant oxygen in order to enhance pyrolysis, unless proven otherwise.

### ***Citations***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

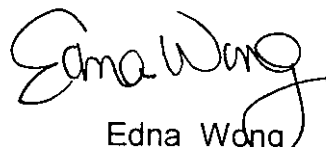
**Wicks et al.** (US Patent No. 6,262,405 B1) is cited to teach a process for microwave destruction of solid contaminated waste.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 5:00 pm, alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1495.

A handwritten signature in black ink that reads "Edna Wong". The signature is stylized with a large, looping "E" and a cursive "Wong".

Edna Wong  
Primary Examiner  
Art Unit 1753